REMARKS

Upon entry of the amendments, Claims 18-31 will be pending. Claims 1-17 have been canceled without prejudice or disclaimer. Support for new claims 18-31 can be found throughout the specification and claims as filed. For example, and for ease of examination, the chart below correlates the previous claims with the newly presented claims:

Original Claim 7	New Claim 18
Original Claim 9	New Claim 19
Original Claim 11	New Claim 20
Original Claim 8	New Claim 22
Original Claim 10	New Claim 24
Original Claim 12	New Claim 25
Original Claim 13	New Claim 26
Original Claim 14	New Claim 27
Original Claim 15	New Claim 29
Original Claim 16	New Claim 30

Thus, no new matter has been added

Specification

Applicants acknowledge with appreciation the guidelines illustrating the preferred layout for the specification. While the Examiner has suggested these guidelines for Applicants' use, the Examiner has not required any amendments to the specification.

Rejections Under 35 U.S.C. § 101

Claims 1-17 are rejected under 35 U.S.C. § 101 because the claimed recitation of a use or a method, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. § 101.

Claims 1-17 have been canceled herewith. Thus, the rejection is moot with respect to these claims. New claims 18-31 are directed to methods that do recite steps involved in the process of the method. Accordingly, Applicants submit that these are proper process claims and meet the requirements of 35 USC § 101. Withdrawal of the rejection under 35 U.S.C. §101 is respectfully requested.

Rejections Under 35 U.S.C. § 112, second paragraph

Claims 1-17 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to recite any active, positive steps delimiting how the claimed process is actually practiced. As previously indicated, Claims 1-17 are canceled herein. New claims 18-31 are directed to methods that do recite steps involved in the process of the method. Accordingly, Applicants submit that these are proper process claims and meet the requirements of 35 USC § 112, ¶ 2.

Claim 14 is rejected because the terms CA 19-9, CA 125, S100B, S100A protein, CYFRA 21, TPS, CHP, and LASP-1 are not written in full in the first instance of their appearance. Claim 14 has been canceled and re-written as new Claim 27. Although most of the terms are standard terms well known in the art, the claim has been amended to include the full terms. Applicants submit that new Claim 27 meets the requirements of 35 USC § 112, ¶ 2.

Claim 10 is rejected under 35 USC § 112, ¶ 2 as being indefinite for reciting "fragments which contain at least 2 amino acid partial sequences according to SEQ ID NOS:1-5 and SEQ ID NOS:7-8." Claim 10 has been canceled, and rewritten as Claim 24 to clarify that, in the claimed method, the sequences that are listed are the binding sites for antibodies in the immunodiagnostic assay. At least two sequences are required because a sandwich assay requires at least two different sequences as binding sites for antibodies for the determination of CPS 1.

In view of the above, withdrawal of the rejections under 35 U.S.C. §112, second paragraph is respectfully requested.

Rejections Under 35 U.S.C. § 112, first paragraph

Written Description

Claims 1-17 are rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the written description requirement. Specifically, the office action states that the claims contain subject matter that was not described in the specification in a manner as to reasonably convey to one skilled in the art that the inventor(s) had possession of the claimed invention at the time the application was filed.

Claims 1-17 are canceled herein, and rewritten as Claims 18-31. As detailed above, support for these new claims is found throughout the specification and claims as filed. New independent Claim 18, from which all other claims directly or indirectly depend, recites a method for the diagnosis of sepsis in a human patient by obtaining a blood or serum sample and determining the presence and amount of human CPS 1 (corresponding to SEQ ID NO:6) in the sample.

As indicated by the Action at page 5, the instant specification sufficiently describes the structure of human CPS 1 (SEQ ID NO:6) and specific fragments thereof. Accordingly, Applicants assert that the new claims as presented herewith meet the written description

requirement of 35 USC § 112, ¶ 1. Reconsideration and withdrawal of the rejection is respectfully requested.

Enablement

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph because, according to the Office Action, the specification does not reasonably provide enablement for use of any CPS 1 fragment of any size from any biological source as a marker for the diagnosis and prognosis and for assessment of severity of any condition. Further, the Office Action states that the use of any CPS-1 inhibitor is not enabled. However, the Office acknowledges that the specification is enabling for the use of human carbamoyl phosphate synthetase of SEQ ID NO.:6 and specific fragments of SEQ ID NO.:6 as a marker for the diagnosis of sepsis in a biological fluid of a patient by using antibodies raised against the specific peptides of SEQ ID NO.:7 or 8.

An application satisfies the enablement requirement if one skilled in the art, after reading the disclosure, could practice the claimed invention without undue experimentation *In re Wands, 858 F.2d 731.* The fact that some experimentation is necessary does not preclude enablement; what is required is that the amount of experimentation "must not be unduly extensive." *Chiron Corporation v. Genentech, Inc., 363 F.3d 1247.*

Like the inquiry with respect of the written description requirement, the adequacy of the disclosure with respect to enablement is judged from the perspective of the skilled artisan. In the present case, Claims 1-17 have been canceled herein. New claims 18-31 are directed to methods for the diagnosis of sepsis in a human patient by obtaining a blood or serum sample and determining the presence and amount of human CPS 1 (corresponding to SEQ ID NO:6) or specific fragments thereof in the sample. A skilled person knowing what molecule is to be determined, and knowing its sequences would have no problems using said sequences or other specific sequences of the complete CPS 1 sequence contemplated and described by the instant application for assay purposes. A skilled person would possess the needed technical skill to practice some routine experimentation as described in the scientific literature relating to and

providing background for the present invention.

Preliminarily, a patent disclosure need not enable information within the knowledge of an ordinary artisan. In the instant case, all of the methodology required for the immunodiagnostic method is well known to those of skill in the relevant biochemical art. No additional guidance is necessary and no undue experimentation is required for one of skill to practice the claimed methods.

Accordingly, Applicants respectfully submit that new claims 18-31 presented herewith are enabled. In light of the rewritten claims, it is believed that the enablement rejections of the Office Action have been made obsolete.

In view of the above arguments, withdrawal of the rejection under 35 U.S.C. §112, first paragraph is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 1, 4, 7, and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ozaki et al. The Examiner has interpreted these claims broadly to encompass the use of CPS 1 levels or fragments thereof from any source to be used for the diagnosis/prognosis of inflammation in liver diseases. Claims 1, 4, 7, and 11 have been canceled. Applicants traverse the rejection as the reference is applied to new claims 18-31.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros., Inc. v. Union Oil Co. of California, 814 F.2d 628, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). According to the Office Action, Ozaki teaches that CPS 1 was elevated in rat experimental hepatitis induced by galactosamine. By contrast, claim 18 of the instant application is directed to a method in which human CPS 1 is used for the diagnosis of sepsis in humans. As discussed in the specification, sepsis is primarily a systemic inflammation of infectious etiology (see paragraphs

3-6 of the published application), not a liver disorder. The elevation of CPS 1 in rats with experimental hepatitis, i.e., a liver disorder experimentally induced in animals, does not anticipate an unrelated disorder in humans. As shown in Figure 2 of the instant application, CPS 1 immunoreactivity in plasma of persons with sepsis is greatly elevated compared to normal healthy persons. Further, Figure 3 shows that sepsis patients express CPS 1 immunoreactivity whereas normal persons do not express CPS 1 immunoreactivity.

In summary, Ozaki et al. use an antibody against CPS 1 in an ELISA assay to detect differences in CPS 1 levels in experimentally-induced hepatitis in rats. Again, this does not anticipate the use of CPS 1 for sepsis in humans. Although CPS 1 measurement is used in Ozaki et al., CPS 1 is used in experimental animals (rats) not humans as in the instant application, and it is used for detection of liver diseases not sepsis. The new claims are restricted to the determination of human CPS 1 in biological samples from human patients, and thus, the claimed invention cannot be anticipated by Ozaki et al. Further, on page 220 in the last paragraph before Acknowledgements, Ozaki et al. state that their assay was not applicable to the human enzyme. The subsequently proposed determination of human CPS 1 "in various liver diseases" (note that sepsis is not mentioned) has not been carried out.

Claims 7, 11, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Tabuchi et al. Claims 7, 11, 12, and 13 have been canceled. Applicants traverse the rejection as the reference is applied to new claims 18-31.

According to the Office Action, Tabuchi et al. disclose that CPS 1 mRNA decreased at time points up to 12 hours post-LPS treatment, but was elevated at a 24-hour time point. Significantly, CPS 1 protein was little changed after LPS-induced endotoxic shock. In contrast, the present invention teaches that CPS 1 protein levels are elevated when sepsis is present. Accordingly, Tabuchi teaches away from the present invention because Tabuchi teaches that CPS 1 protein levels are unchanged. Thus, Tabuchi cannot anticipate the claimed invention.

Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Cerdan et al.

Applicants' claim 17 to inhibitors of CPS 1 has been canceled and has not been rewritten as a new claim. Accordingly, this rejection is moot.

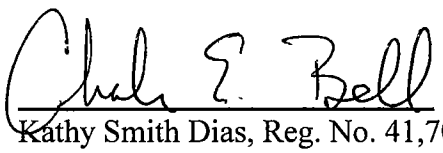
For the foregoing reasons, new claims 18-31 are not anticipated by any of the cited references. Thus, the rejections under 35 U.S.C. § 102 should be withdrawn.

Applicants submit that this paper is fully responsive and that the application is in condition for allowance. Such action is respectfully requested. Should the Examiner believe that anything further is desirable in order to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

With a three-month extension of time and payment of the corresponding fee, this response is due on or before August 6, 2007 (the nominal due date of August 5, 2007 occurring on a Sunday). The Commissioner is hereby authorized to charge payment of any additional fees that may be required, or credit any overpayment of same, to Deposit Account No. 08-1935, Reference No. 2582-017.

Respectfully submitted,

Dated: August 6, 2007



Kathy Smith Dias, Reg. No. 41,707
Charles E. Bell, Reg. No. 48,128
Attorneys for Applicants
Heslin Rothenberg Farley & Mesiti P.C.
Telephone: (518) 452-5600
Facsimile: (518) 452-5579
Customer Number 23405